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October 17, 2014

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Gina McCarthy
Administrator, U.S. EPA
1200 Pennsylvania Ave., N.W.
Mail Code 1101A
Washington, DC 20460

Re: Petition to Adopt UIC Rules for "Non-Endangerment" Demonstrations

Dear Ms. McCarthy:

Enclosed please find a petition for rulemaking submitted pursuant to Section 553(e) of the Administrative Procedures Act (5 U.S.C. § 553(e)). The petition requests the U.S. Environmental Protection Agency ("EPA") to implement rules enabling operators of Class II injection wells who seek underground injection control ("UIC") permits to demonstrate their injection operations will not "endanger" underground sources of drinking water ("USDWs") pursuant to Section 300h(d)(2) of the Safe Drinking Water Act ("SDWA").

Under the existing regulatory framework, Class II operators who seek UIC permits are prohibited from injecting into USDWs unless the aquifer is first determined by EPA to be administratively "exempt." There is currently no alternative process which allows Class II operators to obtain UIC permits by demonstrating that their injection operations will not "endanger" USDWs.

In California, the aquifer exemption process has collapsed. Aquifer exemption requests submitted to the Division of Oil, Gas & Geothermal Resources ("DOGGR") almost two years ago are being held in abeyance while EPA and DOGGR engage in protracted discussions

regarding the nuances of whether and how to expand the previously exempt boundaries of hydrocarbon-producing reservoirs in California. There is no clear path for resolution of the issues, and no ability for operators who are in need of UIC permits to obtain relief. What was initially conceived by EPA to be relatively straightforward and simple regulatory process has resulted in the effective shut down of new enhanced oil recovery ("EOR") projects in California.

Meanwhile, certain Class II operators stand ready and able to prove that their proposed EOR injection activities will not "endanger" underground sources of drinking water. Their projects involve the injection of water or steam sourced from either the hydrocarbon-producing reservoir itself, or from a water source of equal or better quality. The SDWA prohibits regulations which "interfere with or impede" any underground injection for the secondary or tertiary recovery of oil or natural gas, **unless** the requirements are "essential" to assure that USDWs will not be "endangered" by such injection. (42 U.S.C. § 300h(b)(2)(B).) In situations where operators can clearly demonstrate their injection activities will not "endanger" existing and potential future sources of drinking water, the aquifer exemption process represents an overbroad and unnecessary regulatory impediment to EOR operations which is not "essential" to assuring protection of USDWs.

This petition is necessary to bring the existing regulatory scheme into conformance with the express requirements in the SDWA. The requirement that an aquifer exemption be in place prior to or concurrent with issuance of a UIC permit interferes with and impedes Class II injection operations which lack the potential to "endanger" underground sources of drinking water. Class II operators seeking UIC permits are currently denied the opportunity to demonstrate their injection will not "endanger" USDWs - forcing them to wait indefinitely for aquifer exemption approvals with no ultimate guarantee of success. This conflicts with the SDWA's mandate that there be no regulatory impediments to Class II injection unless the regulations are "essential" to assuring protection of underground sources of drinking water.

Given the urgency of the situation in California, Hathaway requests EPA respond to this petition as soon as feasible, but in no event more than sixty (60) days from the date of submittal.

Sincerely,

Hollister & Brace

By: _____
Peter L. Candy

PLC:crr
Enclosure

cc: Avi Garbow, General Counsel, EPA Headquarters

Jared Blumenfeld, Regional Administrator, EPA Region IX

Sylvia Quast, Office of Regional Counsel, EPA Region IX

Jane Diamond, Director, Water Division, EPA Region IX

David Albright, Manager, Ground Water Office,
EPA Region IX

George Robin, Underground Injection Control,
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Steven R. Bohlen, State Oil & Gas Supervisor,
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Jerry Salera, UIC Program Manager,
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California Department of Conservation

Graham St. Michel, Staff Counsel
California Department of Conservation

Dan Wermiel, District Deputy, District 4,
California Department of Conservation, Division of Oil, Gas & Geothermal Resources

PETITION TO THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Petition for Rulemaking to Allow UIC Operators to Obtain Approval For Operations That Do Not Endanger Underground Sources of Drinking Water	)))))	Submitted October 17, 2014 to the Administrator of the United States Environmental Protection Agency

Hathaway LLC, hereby petitions the Administrator of the U.S. Environmental Protection Agency ("EPA") for a rulemaking pursuant to 5 U.S.C. § 553(e) to establish a procedure whereby operators of Class II injection wells, who seek permits to inject into hydrocarbon-bearing reservoirs qualifying as underground sources of drinking water ("USDWs"), can demonstrate that their operations will not "endanger" present or potential future sources of drinking water, irrespective of whether the USDWs have been determined administratively exempt.

Such rulemaking is necessary to bring the current regulations into conformance with the requirements of the Safe Drinking Water Act ("SDWA"), specifically the statutory definition of what it means to "endanger" drinking water sources (42 U.S.C. § 300h(d)(2)), and the prohibition on regulatory requirements which "interfere with or impede" underground injection for the secondary or tertiary recovery of oil or natural gas, **unless** the requirements are "essential" to assure that USDWs will not be "endangered" by such injection. (42 U.S.C. § 300h(b)(2)(B).)

The situation in California has become dire. Class II operators seeking permits to inject into hydrocarbon-bearing reservoirs qualifying as USDWs where underground injection has occurred for decades are currently denied the opportunity to demonstrate their injection will not "endanger" USDWs. They have no alternative but to wait for approval of their aquifer exemption requests, a process which has been placed on hold indefinitely and provides no guarantee of success. Petitioner requests EPA's response to this petition as soon as feasible, but in no event more than sixty (60) days from the date hereof.

I. SUMMARY

Under the existing SDWA regulatory framework, whenever a hydrocarbon-bearing reservoir qualifies as an "underground source of drinking water" or "USDW" (pursuant to 40 CFR §§ 144.3 and 146.3), an aquifer exemption is required prior to or concurrent with the issuance of a Class II permit for underground injection into that aquifer. Aquifer exemptions are essentially determinations made by EPA, with input from the State, that water otherwise meeting the definition of a USDW "cannot now and will not in the future serve as a source of drinking water." (See 40 CFR §§ 146.4 and 144.7.)

Hathaway proposes to inject steam into a hydrocarbon-producing reservoir which qualifies as an "underground source of drinking water" for purposes of operating an enhanced oil recovery ("EOR") project. The water used to generate steam will be sourced either from the reservoir itself, or from a water source of equal or better quality. Hathaway can demonstrate that the injection of steam into the aquifer for EOR purposes will not degrade the quality of water existing in the aquifer, or otherwise interfere with the present or potential future use of the aquifer as a source of drinking water supply. In fact, by removing hydrocarbons from the reservoir, Hathaway's operation will be improving the water quality of the aquifer in the event that someday it may need to be used as a source of drinking water.

EPA has no regulations in effect which allow operators seeking Class II permits to demonstrate, pursuant to SDWA § 1421(d)(2),[1] that their injection operations will not "endanger" USDWs. The existing regulations, which only allow for determining whether or not an aquifer is exempt, are overbroad in their application and potentially "interfere with and impede" operations that do not "endanger" USDWs. The existing regulatory scheme, as applied to operators such as Hathaway, is not "essential" to protect USDWs from endangerment as required by the SDWA. Consequently, as applied to Hathaway's proposed injection operation, the existing regulations do not effectuate Congress's intent in enacting the SDWA.

In order to bring the regulations into compliance with the SDWA, and to conform with Congress's mandate prohibiting regulatory impediments to Class II injection which are not "essential" to protecting underground sources of drinking water, it is necessary to adopt regulations that afford operators such as Hathaway the opportunity to make "non-endangerment" demonstrations. If such operators are not allowed to make "non-endangerment" demonstrations as an alternative to the aquifer exemption process, then the existing regulations unlawfully "interfere with" and "impede" oil and gas recovery operations in violation of the express terms of the SDWA and the intent of Congress.

II. FACTUAL BACKGROUND

In 1982, EPA delegated authority to the California Department of Conservation, Division of Oil, Gas & Geothermal Resources ("DOGGR") for the administration of wells in the Class II portion of the Underground Injection Control ("UIC") program in California. Class II wells inject fluids associated with oil and natural gas production. (See 40 CFR §§ 144.6(b) and 146.5(b).)[2] The two primary types of Class II injection wells operated in California are EOR wells that inject water or steam for the secondary or tertiary recovery of oil and natural gas, and wells that inject produced-water or brine for purposes of disposal.

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[1] Codified at 42 U.S.C. § 300h(d)(2).

[2] 40 CFR §§ 144.6(b) and 146.5(b): Class II wells inject fluids: (1) Which are brought to the surface in connection with natural gas storage operations, or conventional oil or natural gas production and may be commingled with waste waters from gas plants which are an integral part of production operations, unless those waters are classified as a hazardous waste at the time of injection; (2) For enhanced recovery of oil or natural gas; and (3) For storage of hydrocarbons which are liquid at standard temperature and pressure.

Hathaway is a California limited liability company engaged in the business of oil and natural gas production. Hathaway has ongoing operations in several established oil fields located in Kern County, California. These fields include the Kern Front, Poso Creek, Jasmin, and Edison Oil Fields. Steam injection for EOR purposes has been occurring for decades in these oil fields. Hathaway uses EOR wells to inject steam into the oil-bearing formations below these oil fields to recover residual oil and associated natural gas. The injected steam heats and thins the extractable oil, decreasing its viscosity, making it available for recovery via production wells.

The oil-bearing formations underlying these oil fields are saturated with 40-50% or more oil by volume, but contain interstitial water that is relatively fresh (<10,000 mg/l total dissolved solids ("TDS")). Pursuant to EPA's regulations implementing the SDWA, these oil-bearing formations qualify as "underground sources of drinking water" or "USDWs" and therefore are protected against injection activities unless determined by EPA to be administratively exempt.

Prior to 1982, when DOGGR acquired primacy over the Class II injection well program in California, widespread EOR operations were already occurring in established oil fields throughout the State. In order to bring these operations into compliance with SDWA requirements, hydrocarbon-producing aquifers where active injection was known to be occurring were determined by EPA to be administratively exempt. DOGGR had index and contour maps on file at the time which described the geology and related statistics of the oil-bearing formations underlying these oil fields. These index and contour maps used shading enclosed by dashed lines to loosely define the productive limits of the pools as they were understood at the time. Pursuant to the Division's Primacy Application, the loosely defined productive limits shown on these maps were used to define the lateral boundaries of the exempted portions of the hydrocarbon-producing formations for purposes of California's Class II UIC program.[3]

Hathaway has proposed several new steam injection projects in the Kern Front, Poso Creek, Jasmin, and Edison Oil Fields. Each of these projects proposes to "accrete" or expand beyond the shaded areas identified on DOGGR's maps, where water of less than 10,000 mg/l TDS exists in the aquifer. Hathaway's proposed expansion into these hydrocarbon-bearing areas is well within the administrative boundaries of the respective oil fields, but outside the shaded areas EPA previously determined to be exempt. None of the hydrocarbon-bearings aquifers are currently used as sources of drinking water. Nevertheless, because the aquifers qualify as USDWs pursuant to 40 C.F.R. §§ 144.3 and 146.3, aquifer exemptions are required prior to or concurrent with the issuance of Class II permits for injection into the aquifers.

Hathaway can demonstrate that its proposed steam-flood projects will not degrade the quality of water existing in the expanded areas, or otherwise interfere with the potential future

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[3] The Primacy Application, Appendix B, states: "The [exempted portions of the] hydrocarbon-producing aquifers are shown in Volumes I and II of the 'California Oil and Gas Fields', published by the California Division of Oil and Gas. . . . ¶ The aquifers, or portions thereof, are identified in each volume by shading the exempted aquifers on the maps and cross sections. The exempted portions are also described in terms of average depth, thickness, and geologic age on the page opposite each map under the heading 'PRODUCING ZONES'." (Primacy Application, Appendix B.)

use of the aquifers as sources of drinking water. No "endangerment" will occur because the water Hathaway will use to generate steam will be sourced either from the hydrocarbon-bearing formations themselves, or from higher quality sources of water located nearby. Furthermore, no contaminants will be combined with the steam injectate which have the potential to cause the receiving water in the formations to exceed any national primary drinking water regulation or other health-based standards. In fact, by producing oil from the aquifers and removing the hydrocarbons, Hathaway's operations will improve the quality of water in the aquifers for use as drinking water, assuming they ever need to be used for such a purpose in the future.

The process of obtaining an aquifer exemption was originally conceived by EPA to be a straightforward administrative process capable of being accomplished within a relatively short amount of time. UIC permit applicants that need an aquifer exemption in order to conduct injection activities typically delineate the proposed exempted area and submit the delineation to DOGGR, along with information supporting a determination under 40 CFR § 146.4 that the proposed exemption is appropriate. DOGGR is supposed to review the permit application and, pursuant to 40 CFR § 144.7, if the information submitted supports a determination that an aquifer exemption is warranted, make a designation, provide for public participation, and submit a request for approval of the exemption to EPA Region IX. EPA then reviews DOGGR's designation, and makes the final determination to approve or disapprove the exemption request under 40 CFR § 144.7. For relatively non-controversial and non-complex aquifer exemption requests, the entire process is supposed to take no more than 90 to 120 days to complete.

In California, the process of obtaining an aquifer exemption has collapsed. For aquifer exemption requests submitted over a year ago, DOGGR has yet to make a single designation, provide for public participation, or submit a request for approval to Region IX. Instead, EPA and DOGGR are engaged in protracted discussions over the substantive and procedural details of how to expand the previously exempt boundaries of California's hydrocarbon-producing reservoirs. There is no clear path for resolution of the issues, and no ability for operators who are in need of aquifer exemptions to obtain UIC permits. What was initially conceived by EPA to be relatively straightforward and simple regulatory process has resulted in the effective shut down of new EOR projects in California.

III. LEGAL DISCUSSION

A. "Endangerment" Under the Federal Safe Drinking Water Act

In 1974, Congress enacted Part C of the SDWA to establish a federal-state system of regulating underground injection activities. Section 1421 of the Act required USEPA to promulgate regulations establishing minimum requirements for State UIC programs "to prevent underground injection which *endangers* drinking water sources." (SDWA §1421(b)(1) codified at 42 U.S.C. § 300h (b)(1) (italics added).) The minimum criteria for State programs required by Congress under the SDWA are set forth in Section 1421(b)(1), subsections (A) through (D).

Congress specifically defined in the SDWA what it meant by "underground injection which *endangers* drinking water sources." According to Section 1421(d)(2), "[u]nderground injection *endangers* drinking water sources if such injection may result in the presence in

underground water which supplies or can reasonably be expected to supply any public water system of any contaminant, and if the presence of such contaminant may result in the system's not complying with any national primary drinking water regulation or may otherwise adversely affect the health of persons." (42 U.S.C. § 300h (d)(2) (emphasis added).)

As such, there are two key elements to the statutory concept of "endangerment." First, the water in question must either supply or be reasonably expected to supply a public water system. Second, the injection must cause a contaminant to be placed in such water which could result in the public water system not complying with any national primary drinking water regulation, or otherwise could cause adverse health effects. (See SDWA §1421(d)(2) codified at 42 U.S.C. § 300h (d)(2).) Importantly, both elements must be present in order for the SDWA's prohibition on injection to have effect.

B. EPA's UIC Regulations Implementing Minimum Statutory Requirements

Consistent with its statutory mandate, USEPA proposed and adopted administrative, permitting and technical regulations which addressed the minimum criteria for State programs required by Congress under SDWA § 1421(b)(1)(A)-(D). The administrative and permitting regulations, now codified in 40 CFR Part 144, were promulgated on May 19, 1980 (45 FR 33290), and the technical requirements, codified in 40 CFR Part 146, were promulgated on June 24, 1980 (45 FR 42472). The UIC regulations address both statutory elements of "endangerment" set forth in SDWA §1421(d)(2).

1. Groundwater Which Supplies or Can Reasonably Be Expected to Supply A Public Water System.

With regard to the first statutory element of "endangerment," namely that underground water either supply or be reasonably expected to supply a public water system, EPA's regulations require protection of all aquifers containing groundwater of sufficient quantity to supply a public water system with a TDS of less than 10,000 mg/l. (See definition of "underground source of drinking water" or "USDW" found in 40 CFR §§ 144.3 and 146.3.)[4] Protection is required in all circumstances unless and until the aquifer has been determined by EPA to be "exempt." Under EPA's current regulatory approach, protection effectively means a blanket prohibition on all injection into USDWs without an exemption.

With regard to exemptions, EPA's regulations recognize that certain aquifers, otherwise meeting the definition of an USDW (i.e., containing groundwater that is less than 10,000 mg/l TDS) may not warrant protection because the water is not likely to ever be used a source of drinking water. Generally speaking, these waters exist in aquifer formations which are:

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[4] As indicated by the legislative history, Congress directed EPA to use a 10,000 mg/l TDS benchmark to ensure that adequate supplies through future treatment technologies are available for future generations. (See House Report (93rd Congress, 2nd Session) No. 93-1185, dated July 10, 1974, *A Legislative History of the Safe Drinking Water Act*, February 1982, Serial No. 97-9, p. 564.)

(i) mineral, hydrocarbon, or geothermal energy-producing; (ii) too deep to be economically produced for drinking water purposes; or (iii) too polluted from natural processes to be economically treated for drinking water purposes. According to 40 CFR § 146.4(b), aquifers otherwise meeting the definition of an USDW, but not currently being used for drinking water, may be administratively exempted from protection provided the aquifers meet one or more of the foregoing criteria for exemption. (See 40 CFR § 146.4(a) and (b).)[5]

40 CFR § 144.7(b)(1) establishes the procedure States are to follow when designating exempted aquifers as part of their original UIC program submittal. Section 144.7(b)(2) clarifies that no designation of an exempted aquifer submitted as part of State UIC program shall be final until approved by the Administrator of EPA. Section 144.7(b)(3) addresses exemption designations made by States subsequent to approval of their respective UIC programs. Section 144.7(b)(3) vests EPA with exclusive approval authority over all such subsequent designations.[6]

40 CFR § 146.4 thus sets forth the substantive criteria DOGGR must apply for purposes of making aquifer exemption designations to EPA, while 40 CFR § 144.7 imposes a procedural element which vests EPA with final approval authority over such designations.

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[5] 40 CFR § 146.4, in pertinent part, provides: "An aquifer or a portion thereof which meets the criteria for an 'underground source of drinking water' in § 146.3 may be determined under § 144.7 of this chapter to be an 'exempted aquifer' for Class I-V wells if it meets the criteria in paragraphs (a) through (c) of this section. . . . (a) It does not currently serve as a source of drinking water; and (b) It cannot now and will not in the future serve as a source of drinking water because:

> (1) It is mineral, hydrocarbon or geothermal energy producing, or can be demonstrated by a permit applicant as part of a permit application for a Class II or III operation to contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible.
>
> (2) It is situated at a depth or location which makes recovery of water for drinking water purposes economically or technologically impractical;
>
> (3) It is so contaminated that it would be economically or technologically impractical to render that water fit for human consumption; or . . .
>
> (c) The total dissolved solids content of the ground water is more than 3,000 and less than 10,000 mg/l and it is not reasonably expected to supply a public water system."

[6] 40 CFR § 144.7(b)(3) provides: "Subsequent to program approval or promulgation, the [State] Director may, after notice and opportunity for a public hearing, identify additional exempted aquifers. For approved State programs exemption of aquifers identified (i) under §146.04(b) shall be treated as a program revision under §145.32; (ii) under §146.04(c) shall become final if the State Director submits the exemption in writing to the Administrator and the Administrator has not disapproved the designation within 45 days. Any disapproval by the Administrator shall state the reasons and shall constitute final Agency action for purposes of judicial review." All program revisions under 40 CFR §145.32 require EPA approval. (See 40 CFR §145.32(b)(3).)

Under EPA's current regulatory approach, whenever a hydrocarbon-bearing reservoir qualifies as an USDW pursuant to 40 CFR §§ 144.3 and 146.3, the aquifer exemption process is the sole and exclusive means an operator has to obtain a Class II permit to inject. There currently is no regulatory process which affords Class II operators seeking UIC permits the opportunity to prove their injection will not "endanger" drinking water sources. In this regard, EPA's existing regulatory approach completely ignores the SDWA's second element of "endangerment."

2. Violation of National Primary Drinking Water Regulations or Other Health-Based Standards.

With regard to the SDWA's second element of "endangerment," EPA's regulations mirror the language of SDWA § 1421(d)(2). In doing so, they seemingly require that before injection into an "underground source of drinking water" can be prohibited, the injection must have the potential to cause a violation of a national primary drinking water regulation, or otherwise adversely affect the health of persons. 40 CFR § 144.12 provides as follows:

> "(a) No owner or operator shall construct, operate, maintain, convert, plug, abandon, or conduct any other injection activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, **if** the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR part 142 or may otherwise adversely affect the health of persons. The applicant for a permit shall have the burden of showing that the requirements of this paragraph are met." (Emphasis added.)

EPA's implementing regulations thus prohibit injection into "underground sources of drinking water" (i.e., aquifers containing groundwater less than 10,000 mg/l TDS) only in situations which could cause a public water system to not comply with a national primary drinking water regulation, or that might otherwise cause adverse health effects. The regulations suggest operators have the opportunity to make "non-endangerment" demonstrations, by stating that the applicant for a permit shall have the burden of showing that the requirements of the paragraph are met.

This type of approach, assuming it were recognized by EPA, would be consistent with the intent expressed by Congress when it enacted the SDWA. In directing USEPA to promulgate regulations establishing minimum requirements for State UIC programs, Congress endorsed the policy EPA had in effect at the time on deep well injection. The policy specifically authorized operators to make "non-endangerment" demonstrations for purposes of obtaining a permit to inject. By endorsing the "non-endangerment" demonstration approach, Congress provided EPA direction on how it intended the "endangerment" standard set forth in the SDWA to be implemented. Quoting from House Report No. 93-1185, dated July 10, 1974:

> In requiring EPA to promulgate minimum requirements for effective State programs to prevent underground injection which endangers drinking water sources, the Committee intends to **ratify** EPA's policy on deep well injection. (See 39 Fed. Reg. 12922-3, April 9, 1974.) This policy was first adopted by the Federal Water Quality Administration of the Department of the Interior on October 15, 1970. The policy opposes storage or

disposal of contaminants by subsurface injection "without strict control and a **clear demonstration that such wastes will not interfere with present or potential use of subsurface water supplies**, contaminate interconnected surface waters or otherwise damage the environment." (Emphasis added.)[7]

EPA's policy on deep well injection was articulated in the Administrator's Decision Statement #5. (See 39 Fed. Reg. 12922-3, April 9, 1974.) The Administrator's Decision Statement #5 was accompanied by "Recommended Data Requirements for Environmental Evaluation of Subsurface Emplacement of Fluids by Well Injection." These data requirements were intended to provide guidance to potential injectors and regulatory agencies concerning the kinds of information required to evaluate the efficacy of a proposed injection well operation. The parameters described the information which operators needed to provide regulatory agencies in order to demonstrate the environmental acceptability of their proposed injection well operations. Congress stated its intent in House Report No. 93-1185 to "ratify" EPA's approach.

The Administrator's Decision Statement #5 recognized that for certain industries and in certain locations the disposal of wastes and the storage of fluids in the subsurface by use of well injection was the most environmentally acceptable practice available. This included the need for injection wells in certain oil and mineral extraction operations. Congress intended these operations to continue provided operators could prove their injection well operations would not impair the integrity of the subsurface environment:

> [A]dherence to the policy requires the potential injector **to clearly demonstrate** acceptability [of the proposed injection operation] by the provision of technical analyses and data justifying the proposal. Such demonstration requires conventional engineering and other analyses which indicate beyond a reasonable doubt the efficacy of the proposed injection well operation. (Administrator's Decision Statement #5, 39 Fed. Reg. 12922, April 9, 1974.)

Despite Congress, in House Report No. 93-1185, endorsing the concept of "non-endangerment" demonstrations, EPA does not currently interpret or apply its regulations in a manner which affords Class II operators the opportunity to make these demonstrations. Instead, for wells in Classes I, II, and III, EPA applies a "no fluid movement" or "no migration" standard in all circumstances, even in the absence of evidence indicating that an USDW will actually be endangered. This is effectively a blanket prohibition on all injection into USDWs (i.e., aquifers containing groundwater less than 10,000 mg/l TDS), even hydrocarbon-producing aquifers, unless the aquifer has been determined by EPA to be exempt. EPA has applied this policy since promulgating its regulations in 1980. *Consolidated Permit Regulations,* 45 Fed. Reg. 33,290, 33,330 (May 19, 1980):

> "For Classes I, II, and III, no injection may be authorized if it causes or allows the movement of fluid into an USDW. If monitoring indicates movement, the Director may impose additional requirements as necessary. This standard for Classes I, II, and III was

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[7] See House Report (93rd Congress, 2nd Session) No. 93-1185, dated July 10, 1974, *A Legislative History of the Safe Drinking Water Act*, February 1982, Serial No. 97-9, p. 561.

selected because it is operationally meaningful (i.e., it can be measured or otherwise determined) and because it can be achieved through the use of available, good engineering practices." (Id.)

Thus, contrary to EPA's original policy approach which authorized "non-endangerment" demonstrations for deep well injection - an approach Congress expressly ratified when it enacted the SDWA - operators of Class II wells are currently denied the opportunity to demonstrate, pursuant to SDWA § 1421(d)(2), that their injection will not "endanger" existing and potential future sources of drinking water. Instead, whenever a hydrocarbon-bearing reservoir contains water that is less than 10,000 mg/l TDS, the sole and exclusive means an operator has to obtain a Class II permit to inject is through the aquifer exemption process. As discussed below, given the breakdown of the aquifer exemption process in California, EPA's current approach is overbroad, in violation of the SDWA, and is inconsistent with Congressional intent.

C. The Safe Drinking Water Act's Prohibition on Unnecessary Regulatory Impediments to Class II Injection

The SDWA makes clear Congress' intent that EPA's regulations must avoid unnecessary interference with long-standing underground injection practices of the oil and gas industry. In this regard, SDWA § 1421(b)(2) prohibits EPA from prescribing requirements in its regulations for State UIC programs which "interfere with or impede" the underground injection: (1) of brine or other fluids brought to the surface in connection with oil or natural gas production; or (2) any underground injection for the secondary or tertiary recovery of oil or natural gas, unless the requirements are "essential" to assure that underground sources of drinking water will not be "endangered" by the injection. (See SDWA § 1421(b)(2)(A) and (B) codified at 42 U.S.C. § 300h(b)(2)(A) and (B).)

Congress's explained the purpose behind this limitation in the legislative history accompanying enactment of the SDWA. Quoting from House Report No. 93-1185, dated July 10, 1974:

> The Committee's intent in adopting this amendment was not to require EPA to bear an impossible burden of proof as a condition of promulgation of any such regulation. **Rather, the Committee sought to assure that constraints on energy production activities would be kept as limited in scope as possible while still assuring the safety of present and potential sources of drinking water.** (Emphasis added.)[8]

In addition, Congress explained what it meant by the term "essential," and what it meant by the terms "interfere with or impede." Quoting again from House Report No. 93-1185:

> In deciding what is an "essential" requirement, the Committee intends that the types of measures referred to in the Administrator's Decision Statement Number 5 [authorizing operators to prove the efficacy of their proposed injection well operations] and those

[8] See House Report (93rd Congress, 2nd Session) No. 93-1185, dated July 10, 1974, *A Legislative History of the Safe Drinking Water Act*, February 1982, Serial No. 97-9, p. 563.

> referred to in this report [e.g., protection of water less than 10,000 mg/l TDS] be considered to be "essential" unless the contrary could be demonstrated with respect to a specific well or injection. Moreover, in using the words "interfere with or impede" the Committee did not intend to include every regulatory requirement which would necessitate the expenditure of time, money, or effort. **Rather, the Committee intended to refer to those requirements which could stop or substantially delay production of oil or natural gas.** (Emphasis added.)[9]

Congress was clear in 1974 when it enacted the SDWA that it intended to protect not only currently-used sources of drinking water, but also potential future drinking water sources. In House Report No. 93-1185, Congress clarified this meant water with TDS levels better than 10,000 mg/l. Protection of sub-10,000 mg/l TDS water was something Congress apparently saw as "essential" to preventing endangerment of potential drinking water sources. Similarly, by expressly referencing the measures identified in the Administrator's Decision Statement #5, Congress considered the rigorous data requirements operators needed to comply with in making "non-endangerment" demonstrations to be "essential" to preventing endangerment of potential drinking water sources. Notably, no mention was made of the aquifer exemption process in either the Administrator's Decision Statement #5 nor in House Report No. 93-1185. Requiring aquifer exemptions as a precondition to issuing permits to inject was a concept later conceived by EPA following enactment of the SDWA. It was not something Congress considered "essential" to preventing endangerment when it enacted the SDWA.

D. The Existing Aquifer Exemption Process Unlawfully "Impedes" Oil and Gas Recovery Operations in Violation of the Express Terms of the SDWA

When Congress enacted Part C of the SDWA, it mandated that constraints on energy production activities would be kept as limited in scope as possible while still assuring the safety of present and potential future sources of drinking water.[10] Congress prohibited regulatory requirements which effectively stop or substantially delay the production of oil or natural gas unless the requirements are "essential" to assure that underground sources of drinking water will not be "endangered." [11] (See SDWA § 1421(b)(2)(A) and (B) codified at 42 U.S.C. § 300h(b)(2)(A) and (B).)

Although the aquifer exemption process was originally conceived by EPA to be a relatively simple and quick process to complete, it has now become an unreasonable barrier to new oil and gas production in California. There is no clear path for resolution of the issues currently being debated by EPA and DOGGR, and no ability for operators who are in need of aquifer exemptions to obtain UIC permits. The net result is that permitting of new California EOR projects has indefinitely been placed on hold. In situations where operators can clearly demonstrate their proposed injection will not in any way degrade the quality of water in the

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[9] Id.

[10] Id.

[11] Id.

aquifer, regulations which require these operators to obtain aquifer exemptions represent unnecessary and non-essential impediments to the production of oil and natural gas.

Therefore, in order to comply with Congress' mandate to assure protection of drinking water supplies while keeping constraints on energy production as limited in scope as possible, a process is necessary by which operators can make "non-endangerment" demonstrations to the State. As it stands, the requirement that an aquifer exemption be in place prior to or concurrent with issuance of UIC permit "interferes with and impedes" Class II injection operations which lack the potential to "endanger" USDWs. Denying operators the ability to prove their injection will not "endanger" USDWs, but instead forcing them to wait indefinitely for aquifer exemption approvals, conflicts with the SDWA's mandate to keep constraints on energy production as limited in scope as possible. Without such a process, the existing regulations unlawfully "impair" and "impede" oil and gas recovery operations in violation of the express terms of the SDWA and the intent of Congress.

IV. CONCLUSION

Hathaway's request for rulemaking is necessary to bring the current regulations into conformance with the requirements of the SDWA, specifically the statutory definition of what it means to "endanger" drinking water sources (42 U.S.C. § 300h(d)(2)), and the prohibition on non-essential regulatory requirements which unnecessarily "interfere with or impede" underground injection for the production of oil and natural gas. (42 U.S.C. § 300h(b)(2)(B).)

To the extent that existing regulations do not afford operators the opportunity to make "non-endangerment" demonstrations, and do not require approved State programs to afford operators such opportunity, they are in violation of the express provisions of the SDWA. Given the urgency of the situation, and the fact new California EOR projects have been indefinitely placed on hold, Hathaway requests EPA respond to this petition as soon as feasible, but in no event more than sixty (60) days from the date hereof.

Respectfully submitted,

HOLLISTER & BRACE

By: _____
Peter L. Candy